Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 1, 2, 4-9, 18, 21, 22, 27, and 33, as follows:

Listing of Claims:

1. (Currently amended) A method for calculating values for pixels of an image of an environment represented by geometric primitives that are defined by geometric data, the method comprising:

transforming the geometric primitives from a first coordinate space to a second coordinate space;

~~selecting a first transformed primitive from the transformed primitives in the second coordinate space;~~

for at least a plurality of the transformed primitives, ~~without shifting any of the other transformed primitives,~~ separately shifting each of the ~~first~~ transformed primitives in the second coordinate space by a respective first sub-pixel offset from a respective first pixel position to a respective first sub-pixel position;

separately rendering each of the ~~first~~ shifted primitives at the respective first sub-pixel position to generate values for a respective first set of pixels for the each ~~first~~ shifted primitive;

separately shifting each of the plurality of ~~first~~ transformed primitives in the second coordinate space by a respective second sub-pixel offset from the respective first pixel position to a respective second sub-pixel position;

separately rendering each of the ~~first~~ shifted primitives at the second sub-pixel position to generate values for a respective second set of pixels for each ~~the first~~ shifted primitive; and

combining the values for the respective first and second sets of pixels for each of the plurality of ~~first~~ transformed primitives to determine values for a respective resultant set of

pixels for each of the plurality of ~~the first~~ transformed primitives that are used in calculating ~~included in~~ the pixels of the image.

2. (Currently amended) The method of claim 1, further comprising writing the values for the first set of pixels for one of the plurality of ~~first~~ transformed primitives to a first buffer and writing the values for the second set of pixels for the same ~~second~~ transformed primitive to a second buffer.

3. (Original) The method of claim 2 wherein either the first or second buffer comprises a z-buffer.

4. (Currently amended) The method of claim 1 wherein at least one of the plurality of ~~the~~ geometric primitives comprises ~~represents~~ a strip of connected triangles.

5. (Currently amended) The method of claim 1 wherein at least one of the plurality of ~~the~~ geometric primitives comprises ~~represents~~ a fan shaped set of connected triangles.

6. (Currently amended) The method of claim 1 wherein at least one of the plurality of ~~the~~ geometric primitives comprises ~~represents~~ a set of disjoint triangles.

7. (Currently amended) The method of claim 1 wherein separately shifting each of the plurality of ~~the first~~ transformed primitives by the respective first sub-pixel offset comprises separately shifting each of the plurality of ~~the first~~ transformed primitives to a sub-pixel location corresponding to a first sampling location of a sampling pattern.

8. (Currently amended) The method of claim 1 wherein combining the values for the respective first and second sets of pixels for each of the plurality of ~~the first~~

transformed primitives comprises averaging the values for the respective first and second sets of pixels for each of the plurality of ~~the~~ first transformed primitives.

9. (Currently amended) The method of claim 1 wherein combining the values for the respective first and second sets of pixels for each of the plurality of ~~the first~~ transformed primitives comprises weighting the values for the respective first and second sets of pixels as a function of the respective offsets and combining the weighted values.

10. (Previously presented) A method for calculating values for pixels of an image of an environment represented by geometric primitives, the geometric primitives defined by geometric data, the method comprising:

reading the geometric data;

setting-up the geometric primitives into a scene of the environment;

separately issuing each geometric primitive of the scene a plurality of times, for each issuance of one of the geometric primitives,

shifting the geometric primitive by a sub-pixel offset from a first pixel position to a respective sub-pixel position; and

rendering the shifted geometric primitive to generate values for a respective set of pixels for the shifted geometric primitive at the respective sub-pixel position; and

combining the values for the respective sets of pixels for the shifted geometric primitive at each of the respective sub-pixel positions to provide values for a resultant set of pixels for the rendered geometric primitive.

11. (Previously presented) The method of claim 10 wherein shifting the geometric primitive by a sub-pixel offset comprises shifting the geometric primitive to a location corresponding to a sampling location of a sampling pattern, and the shifting and rendering of the geometric primitive is repeated for each sampling location of the sampling pattern to generate

values for respective sets of pixels for a respective intermediate image of the geometric primitive.

12. (Cancelled)

13. (Previously presented) The method of claim 11 wherein combining the values for the respective sets of pixels for the shifted geometric primitive at each of the respective sub-pixel positions comprises averaging the values for the respective sets of pixels from the respective sub-pixel positions of the geometric primitive.

14. (Previously presented) The method of claim 11 wherein combining the values for the respective sets of pixels for the shifted geometric primitive at each of the respective sub-pixel positions comprises weighting the values for the respective sets of pixels as a function of the respective sub-pixel offsets and combining the weighted values.

15. (Previously presented) The method of claim 10, further comprising writing the values for the set of pixels for the shifted geometric primitive at a first sub-pixel position to a buffer.

16. (Original) The method of claim 10 wherein setting-up the geometric primitives comprises transforming the geometric data from a first coordinate space to a second coordinate space and generating scene geometry.

17. (Previously presented) The method of claim 10 wherein shifting the geometric primitive by a sub-pixel offset from a first pixel position to a respective sub-pixel position comprises stochastically selecting the sub-pixel offset and shifting the geometric primitive by the selected offset from the first pixel position.

18. (Currently amended) A method for calculating values for pixels of an image of an environment represented by geometric primitives that are defined by geometric data, the method comprising:

transforming the geometric primitives from a first coordinate space to a second coordinate space;

for at least a plurality of transformed geometric primitives, reissuing each geometric primitive of the plurality for each sampling location of a sampling pattern, each time one of the plurality of ~~a~~ geometric primitives is issued,

~~without shifting any of the other transformed geometric primitives,~~ shifting the transformed primitive as an individual primitive by a sub-pixel offset from a first pixel position to a respective sub-pixel position corresponding to a respective one of the sampling locations of the sampling pattern, and

individually rendering the shifted transformed primitive to generate values for a respective set of pixels for the transformed primitive shifted to the respective sub-pixel position, and

for each of the plurality of geometric primitives, combining the values for the respective sets of pixels from ~~of the transformed primitive at~~ the respective sub-pixel position to determine values for a resultant set of pixels for ~~the~~ respective geometric primitives.

19. (Previously presented) The method of claim 18, further comprising storing the values for the respective sets the pixels of the transformed primitive at the respective sub-pixel position in a respective buffer.

20. (Previously presented) The method of claim 19 wherein at least one of the buffers in which the values for a set of pixels are stored comprises a z-buffer.

21. (Currently amended) The method of claim 18 wherein combining the values for the respective sets of pixels from ~~of the transformed primitive at~~ the respective sub-

pixel position comprises averaging the values for the respective sets of pixels from ~~for the transformed primitive at~~ the respective sub-pixel position.

22. (Currently amended) The method of claim 18 wherein combining the values for the respective sets of pixels from ~~of the transformed primitive at~~ the respective sub-pixel position comprises weighting the values for the respective sets of pixels from ~~as a function of~~ the respective sub-pixel offsets and combining the weighted values.

23. (Original) The method of claim 18 the sampling pattern includes at least two sampling locations.

24. (Previously presented) A graphics system for calculating values for pixels of an image of an environment represented by geometric primitives, the geometric primitives defined by geometric data, the system comprising:

a primitive set-up engine for reading the geometric data and generating transformed geometric data therefrom, the transformed geometric data representing the geometric primitives set-up in a new coordinate space;

a rendering stage coupled to the primitive set-up engine to receive the transformed geometric data for a geometric primitive, the rendering stage configured to separately issue each of the geometric primitives in the new coordinate space a plurality of times, for each issuance of one of the geometric primitives, the rendering stage further configured to shift the geometric primitive a respective sub-pixel offset from a first pixel position to a respective sub-pixel position without shifting any of the other transformed geometric primitives, and calculate values for respective sets of pixels representing the shifted geometric primitive at the respective sub-pixel position; and

a buffer coupled to the rendering stage into which the values for the respective sets of pixels calculated by the rendering stage are stored.

25. (Previously presented) The graphics system of claim 24 wherein the rendering stage shifts the geometric primitive to respective sub-pixel offsets and calculates values for the respective sets of pixels representing the shifted geometric primitive at the respective sup-pixel position for each sampling location of a sampling pattern, the respective sub-pixel offsets by which the geometric primitive is shifted corresponding to the location of a respective sampling location.

26. (Original) The graphics system of claim 25, further comprising additional buffers, the number of which is equal to one less than the number of sampling locations.

27. (Currently amended) The graphics system of claim 26, further comprising a combining circuit coupled to the buffer and any additional buffers to combine the values for the respective sets of pixels of the different buffers to determine the values for a resultant set of pixels for the geometric primitive.

28. (Previously presented) The graphics system of claim 27 wherein the combining circuit combines the values for the sets of pixels of the buffer and any additional buffers by averaging the values for the respective sets of pixels for the geometric primitive at the respective sub-pixel position.

29. (Previously presented) The graphics system of claim 27 wherein the combining circuit combines the values for the sets of pixels of the buffer and any additional buffers by weighting the values of the respective sets of pixels as a function of the respective sub-pixel offsets and combining the weighted values.

30. (Original) The graphics system of claim 24 wherein the rendering stage includes a primitive buffer for storing transformed geometric data and the geometric primitive comprises a strip of connected triangles.

31. (Original) The graphics system of claim 24 wherein the rendering stage includes a primitive buffer for storing transformed geometric data and the geometric primitive comprises a fan shaped set of connected triangles.

32. (Original) The graphics system of claim 24 wherein the rendering stage includes a primitive buffer for storing transformed geometric data and the geometric primitive comprises a set of disjoint triangles.

33. (Currently amended) A graphics system for calculating values for pixels of an image of an environment represented by geometric primitives, the geometric primitives defined by geometric data, the graphics system comprising a multi-stage processing pipeline transforming the geometric data from a first coordinate space to a second coordinate space, and further configured to separately reissue for each geometric primitive for each sampling location of a sampling pattern, each time the geometric primitive is issued, shifting a transformed primitive by a sub-pixel offset from a first pixel position to a respective sub-pixel position corresponding to a respective one of the sampling locations of the sampling pattern and rendering the shifted primitive at the respective sub-pixel position to generate values for a respective set of pixels for the geometric primitive shifted to the respective sub-pixel location, the multi-stage processing pipeline further configured to combine the values for the respective sets of pixels for the geometric primitive shifted to the respective sub-pixel location to determine the values for a resultant set of pixels for the geometric primitive.

34. (Previously presented) The graphics system of claim 33 wherein the multi-stage processing pipeline further stores the values for the respective sets of pixels for the geometric primitive shifted to a respective sub-pixel location in a respective buffer.

35. (Previously presented) The graphics system of claim 33 wherein the multi-stage processing pipeline combines the values for the respective sets of pixels for the

geometric primitive shifted to a respective sub-pixel location by averaging the values for the respective sets of pixels from the geometric primitive shifted to a respective sub-pixel location.

36. (Previously presented) The graphics system of claim 33 wherein the multi-stage processing pipeline combines the values for the respective sets of pixels for the geometric primitive shifted to a respective sub-pixel location by weighting the values of the respective sets of pixels from the geometric primitive shifted to a respective sub-pixel location as a function of the respective sub-pixel offsets and combining the weighted values.